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ABSTRACT

This paper presents the Virtual Resource Center in Behavioral Disorders (VRCBD), a World Wide Web site designed to provide training and ongoing support for students and professionals preparing to work with children with behavioral disorders and their instructors. The goals of VRCBD are: to provide instructional supports for instructors and users of the Teacher Problem Solving Skills (TPSS) program; and to provide an opportunity for asynchronous and synchronous communications between preservice and in-service teachers and professionals in the field of behavioral disorders. Design features and content of the site are presented along with a discussion of the ongoing collection of quantitative and qualitative data related to site usage and learning outcomes. (Author/MES)

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The Virtual Resource Center in Behavioral Disorders: Dissemination and Evaluation of Instructional Supports via the World Wide Web

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Abstract: This paper presents a World Wide Web site designed to provide training and ongoing support for students and professionals preparing to work with children with behavioral disorders, and their instructors. Design features and content of the site are presented along with a discussion of the ongoing collection of quantitative and qualitative data related to site usage and learning outcomes.

Theoretical Base

Materials designed to assist teachers in working with students with behavioral problems are currently in high demand. According to *The National Educational Goals Report* (NEGR, 1995), such training includes 93% of America's teachers. There continues to be a high demand for training programs in behavioral disorders from local school districts and state departments. Unfortunately, as Gersten, Morvant, and Brendelman (1995) document, there is a gap between educators receiving training and altering what happens in the classroom. The mission statement of the U.S. Department of Education's Professional Development Team, an outgrowth of the Goals 2000 legislation, emphasized the need for on-going, long-term, continuous programs designed to promote collaboration, collegiality, and inquiry by all members of the school community (1996).

The design and development of World Wide Web sites as a delivery medium for instructional supports in both pre-service and in-service teacher education have been well documented. Research and evaluation of these web-based supports, however, is in its infancy with much of the information being purely descriptive in nature (Newmarch, 1997, Windschitl, 1998). Web-based delivery of instructional supports for teachers can, it appears, overcome many of the drawbacks inherent in traditional delivery methods (Shotsberger, 1997). Although these technologies appear promising, there is a need for research focused on instructional outcomes and what teachers actually do differently or better because of their readily-available access to information and support.

Virtual Resource Center in Behavioral Disorders Web Site

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The Virtual Resource Center in Behavioral Disorders (VRCBD) was constructed to provide training and ongoing support for pre-service teachers and field professionals who utilize the *Teacher Problem Solving Skills (TPSS)* programs and their instructors. In addition, opportunities for electronic communication provided through the VRCBD web site enable social discourse among teachers around the instructional materials and current topics in behavioral disorders.

Fig. 1: VRCBD Main Menu

A Tour of the Virtual Resource Center in Behavioral Disorders

The goals of *VRCBD* are:

- to provide instructional supports for instructors and users of the *TPSS* programs; and
- to provide an opportunity for asynchronous and synchronous communications between pre-service and in-service teachers and professionals in the field of behavioral disorders.

The Main Menu (Fig.1) of the VRCBD site was designed to give users easy access to all aspects of the Virtual Resource Center. From this screen the user can access descriptions and dissemination information about the *TPSS* Series. These multimedia programs use case-study scenarios and classroom videos to provide problem-solving experience in the processes of investigation, assessment, planning, and observation needed by professionals serving children with social, emotional, and behavioral disorders.

The Instructor Resource area of the VRCBD gives instructors using the *TPSS* Series access to teaching materials and other resources available for use in their training programs. Printable materials are available in PDF (Portable Document Format) files and include conference papers related to *TPSS*, transcripts of expert commentaries from the programs, and forms for use with the *TPSS* programs. Access to an electronic discussion forum provides an opportunity for asynchronous communications between instructors across the country and VRCBD personnel. Planning for the BDOnline Workshops and other training opportunities is facilitated through this discussion list. In addition to these *TPSS* related resources, links to a wide variety of Internet resources related to behavioral disorders are available through the Resource Links section of the VRCBD. Contributions of additional resources are welcomed and are easily communicated to the VRCBD staff through a hyperlink.

The authors of the *TPSS* series and members of the VRCBD staff provide frequent training opportunities at national conferences and at a week long Summer Institute held on the University of Missouri

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campus. Information on upcoming training events and registration for the institute are available through the VRCBD site. Other areas of the VRCBD contain information on the authors and contributors of the *TPSS* series.

Establishment of an online community where professionals and students in the field of emotional and behavioral disorders can interact in regular discussions and idea sharing is one of the primary goals of the VRCBD. Three online conferences (BDOnline) are scheduled for 1999. Experts in the field of behavioral disorders will establish an "online presence" through the VRCBD conference. Instructors and in-service leaders will be invited to bring their classes online during a two-week period for interaction with the expert. Readings will be furnished as PDF files for download to establish a common ground for discussion.

In addition to the virtual conferences the VRCBD can establish connections between classes using a particular *TPSS* program. Discussion lists have been established for each of the four programs and the VRCBD maintains a current database of instructors using the programs to facilitate these connections. Synchronous discussions between classes or in-service groups wishing to interact in real time is also possible in the VRCBD chat room. This room uses *EveryChat* software installed on the University of Missouri's College of Education web server. This software facilitates online chats without the need for additional software installed on remote users' computers. Users simply log into the *EveryChat* environment using their web browser.

In addition to these opportunities for online communication, the VRCBD has provided a User Exchange area to facilitate the sharing of instructional ideas and technical assistance for professionals wishing to share their ideas through the web, thus enabling transfer of training. Members of the VRCBD staff are available to create web pages or assist those wishing to create their own pages for the publication of instructional ideas on the web. Space has also been designated for instructors to share their course web pages, demonstrating how the *TPSS* programs are used in their course curriculum. In addition, web publishing as a means of sharing ideas is taught as part of the VRCBD Summer Institutes.

Methods for Data Collection

Reeves (1998), in proposing the best means for answering critics of media and technology, emphasized that efforts to integrate media and technology into education should be guided by strong research and evaluation. In order to evaluate the effectiveness of the instructional supports provided through the VRCBD, quantitative and qualitative data are gathered continuously from the site.

Figure 2: VRCBD Entrance Survey

In order to determine who is using the site, a user survey was designed as a requirement for entrance into the VRCBD pages (Fig. 2). The survey consists of a simple form where the user supplies his name and e-mail address, and answers three questions describing reasons for visiting the site. This information is collected using a custom CGI (Common Gateway Interface) script. Data are available as either an HTML page displaying each user in order, or as a text delimited file that can be imported for use in statistics or database programs. Completion of this survey places a temporary "web cookie" in the user's browser. Subsequent pages use an additional CGI script to check for the presence of this "cookie." Attempting to enter the site without filling in the survey information gives the user an error message and returns them to the survey page.

In addition to the survey page, a custom tracker is also installed on the VRCBD site. This tracker logs site usage data including Internet addresses of visitors to the site, pages visited, and time spent at VRCBD. This information can be displayed in graphical form or is available in a text file.

In order to evaluate the growth and effectiveness of communications, data can be gathered from synchronous and asynchronous discussions at the Virtual Resource Center for qualitative analysis. All messages to the VRCBD discussion lists are automatically archived on the College of Education server. This information is searchable and can be sorted by subject, date, or author. The *EveryChat* software used for real time discussions creates a transcript of discussions that can be used for analysis of emerging themes and can also be sent to discussion participants via email. Additional data will be collected from participants of the online conferences. Survey instruments have been placed as PDF files on the BDOnline page. Instructors choosing to include the online conference as a class assignment are requested to collect data from their students. Survey instruments include:

- Daly-Miller Writing Apprehension Test;

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- Kolb Learning Styles Inventory;
- Prior Computer and Telecommunications Use Survey;
- Education and Experience Survey; and
- Participant Follow-up Survey

Through these instruments the researchers at the VRCBD hope to gain information regarding web site usage as related to user differences in such factors as writing apprehension, learning styles, prior experience, education, and satisfaction.

In the future the VRCBD hopes that the web site will become an online forum for the sharing of instructional ideas through web pages contributed to or by professionals who are actively using the strategies and techniques presented through the *TPSS* programs in their work with children. The fourth *TPSS* program, soon to be released, presents performance support tools for developing a variety of cognitive-behavioral interventions. As teachers and professionals use these tools, their strategies will be collected in the User Exchange area of the VRCBD. These contributions will be analyzed as one more means of determining the effectiveness of these web-based instructional supports.

Expected Results

Through the quantitative and qualitative measures described above, researchers at the VRCBD will study the implementation of telecommunication supports for the purpose of understanding their impact on the development of knowledge, skills, and reflective processes by pre-service and in-service teachers and professionals. The evaluation procedures now in place for the VRCBD will enable project staff to study in depth the impact of each web-based instructional support on learner outcomes. Over time multiple data sources will be used to examine relationships and generate hypotheses for further study. Variables which impact the effectiveness and efficiency of web-based instructional supports for personnel preparation in behavioral disorders will be identified and recommendations will be made for the effective use of telecommunications in these programs.

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